ABSTRACT

Coatings for implantable electrodes consisting of single-or multi-walled nanotubes, nanotube ropes, carbon whiskers, and a combination of these are described. The nanotubes can be carbon or other conductive nanotube-forming materials such as a carbon-doped boron nitride. The nanotube coatings are grown "*in situ*" on a catalytic substrate surface from thermal decomposition, or they are bonded to the substrate using a metal or conductive metal oxide thin film binder deposited by means of a metal compound precursor in liquid form. In the latter case, the precursor/nanotube coating is then converted to a pure metal or conductive metal oxide, resulting in the desired surface coating with imbedded nanotubes.